



UNITED NATIONS GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT

SUBCOMMITTEE ON GEODESY

**22nd International Laser Ranging
Workshop**

Nicholas Brown
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Co-Chair UN-GGIM Subcommittee on Geodesy



UN-GGIM

United Nations Committee of Experts on
Global Geospatial Information Management

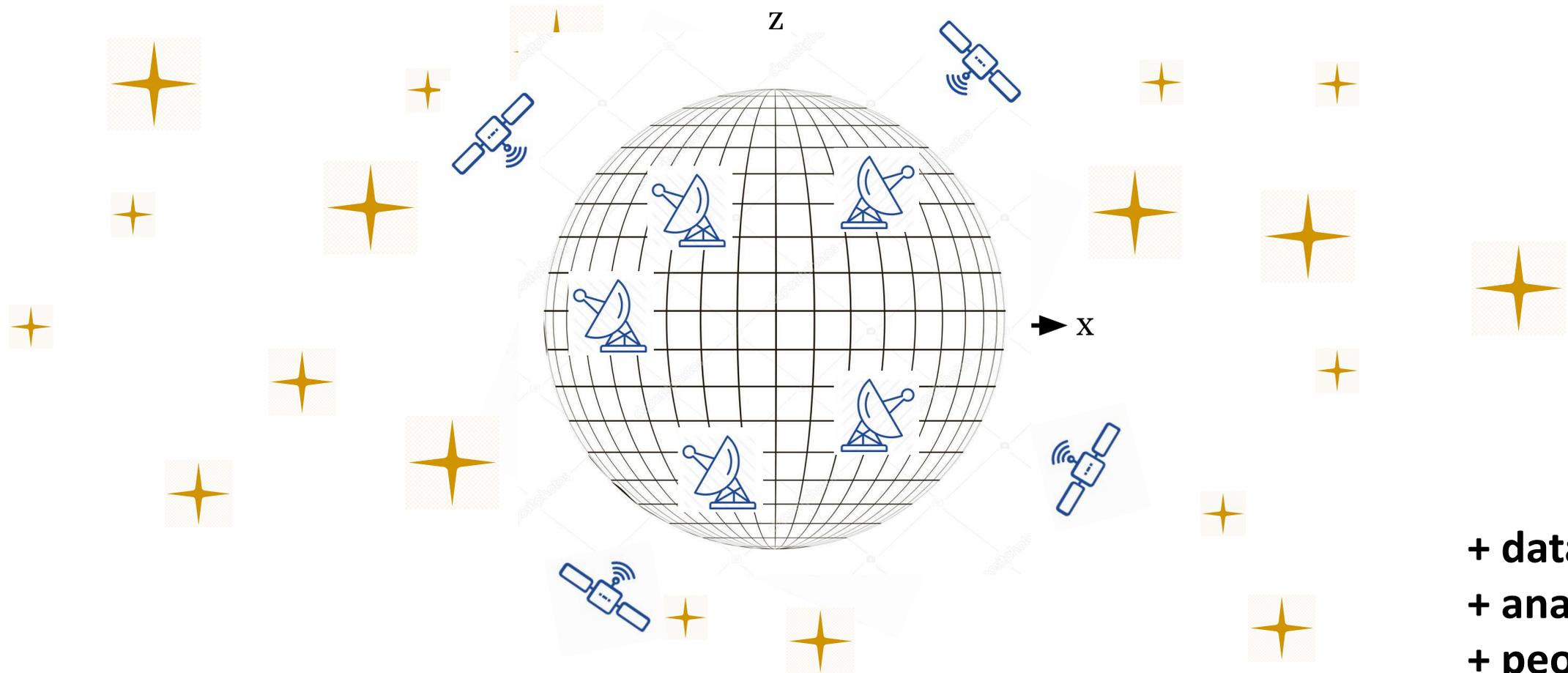
Subcommittee on
Geodesy

Positioning geospatial information to address global challenges

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Global Geodetic Reference Frame



+ data
+ analysis
+ people



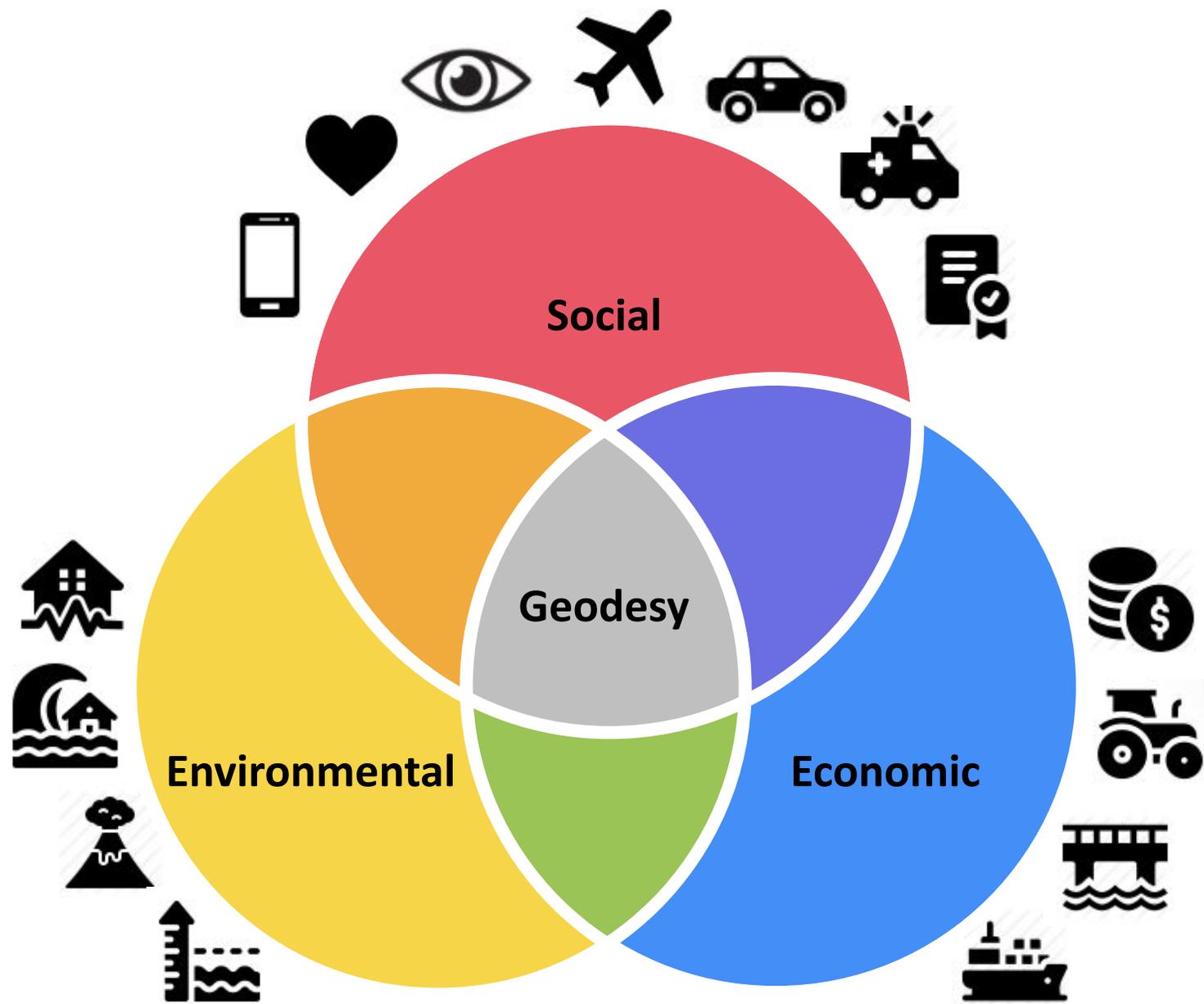
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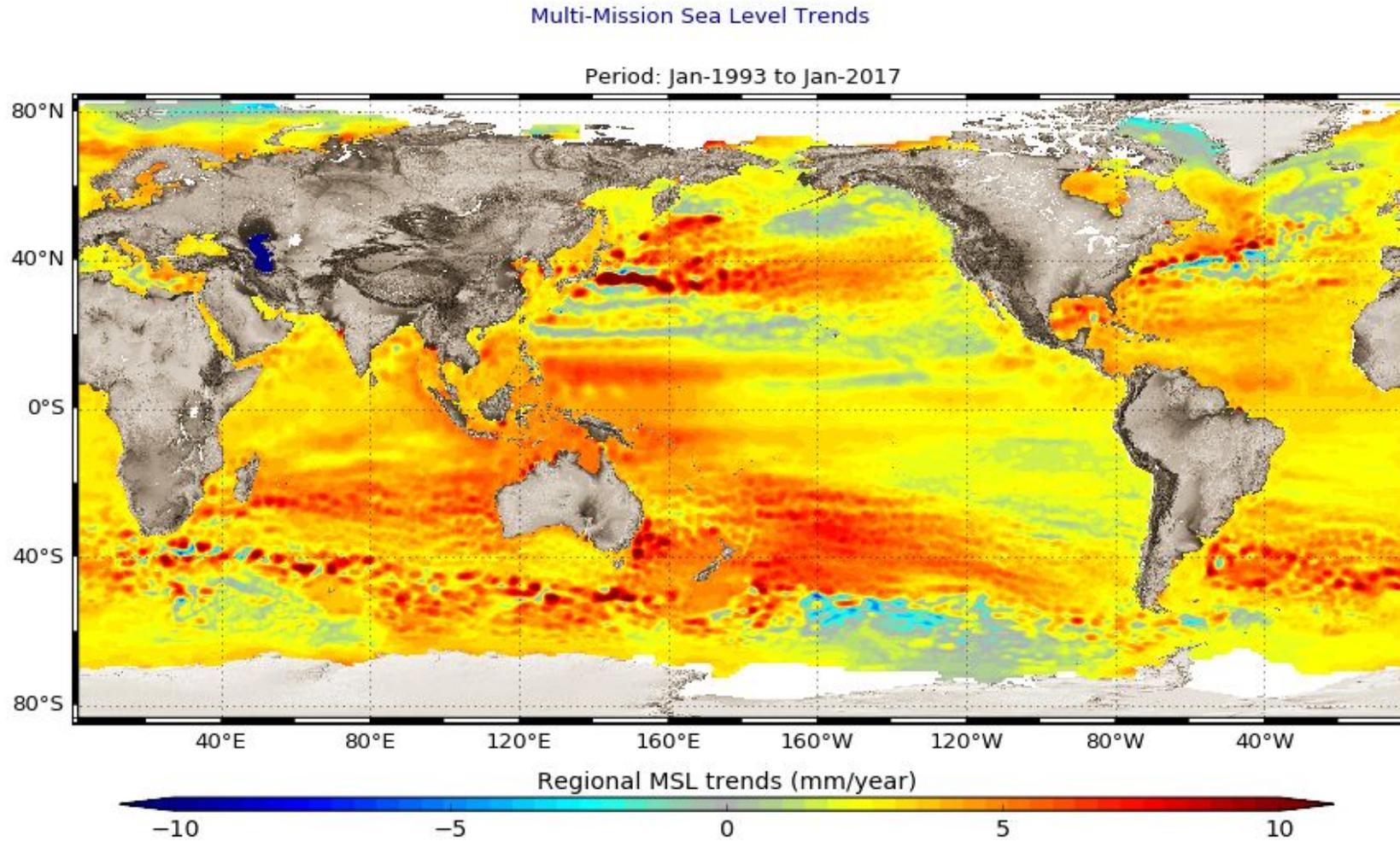
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Our lifestyle is improved by geodesy



Safer, more resilient communities need geodesy



© CNES/LEGOS/CLS, 2017

Source: NASA



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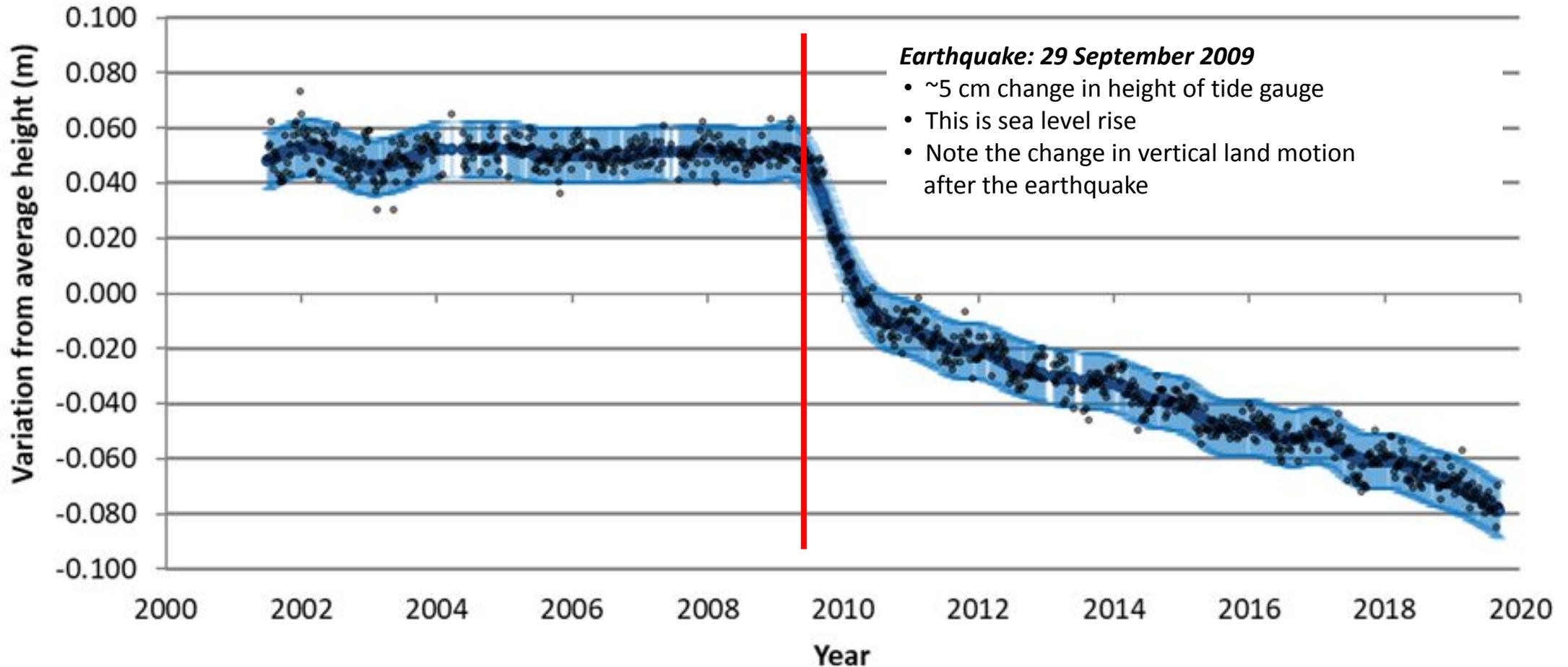
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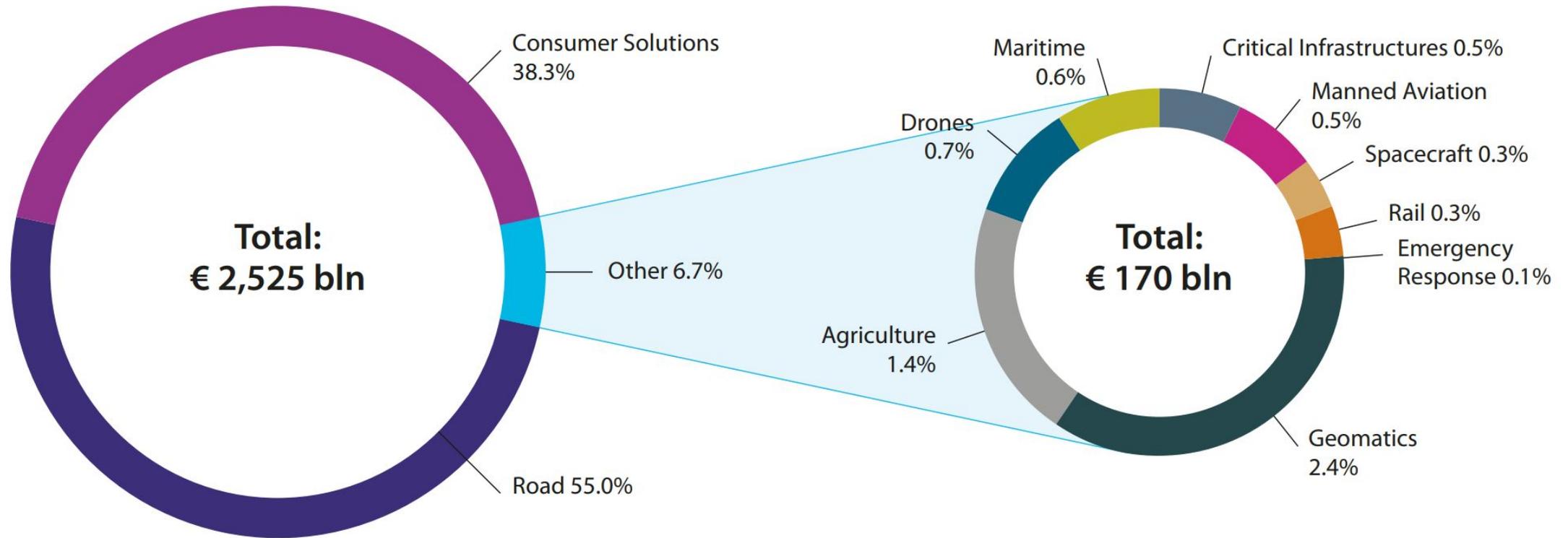
Sea level rises and rises

Samoa (Apia) - GNSS



Our dependence on geodesy is growing ... fast

Cumulative Revenue 2019-2029 by segment



Source: GSA Market Report 2019



Economic benefits from investment in geodesy

- The loss of GPS service would average a \$1 billion per-day impact to the United States alone.
- The economic impact to the UK from a loss of GNSS is \$USD 6.7b every 5 days across ten application domains: Road, Rail, Aviation, Maritime, Food, Emergency and Justice Services, Surveying, Location-Based Services (LBS), Other Infrastructure, and Other Applications.

June 2019

Economic Benefits of the Global Positioning System (GPS)

Source: NIST, 2019

Economic impact to the UK of a disruption to GNSS

Showcase Report

April 2017



Source: London Economics, 2017



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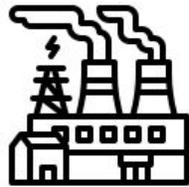
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Sustain the geodesy supply chain

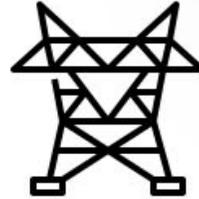
COAL / SUN



POWER PLANT



POWER LINES



HOME SUPPLY



CHARGED PHONE



Source

Production

Transmission

Access

Application

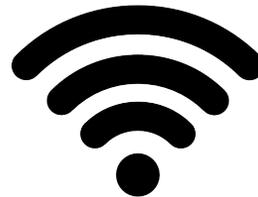
GEODETC
INFRASTRUCTURE



IAG SERVICES



INTERNET



SATELLITES



LOCATION
ENABLED



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Global Geodetic Reference Frame

- Recognising the importance of geodesy, UN General Assembly adopted in 2015 the resolution ‘A Global Geodetic Reference Frame for Sustainable Development’.
- The role of the Subcommittee on Geodesy is to implement the resolution, that is, take steps to sustain the Global Geodetic Reference Frame.

United Nations A/RES/69/266

 **General Assembly** Distr.: General
11 March 2015

Sixty-ninth session
Agenda item 9

Resolution adopted by the General Assembly on 26 February 2015
[without reference to a Main Committee (A/69/L.53 and Add.1)]

69/266. A global geodetic reference frame for sustainable development

The General Assembly,
Reaffirming the purposes and principles of the Charter of the United Nations,
Reaffirming also its resolution 54/68 of 6 December 1999, in which it endorsed the resolution entitled “The Space Millennium: Vienna Declaration on Space and Human Development”,¹ which included, inter alia, key actions to improve the efficiency and security of transport, search and rescue, geodesy and other activities by promoting the enhancement of, universal access to and compatibility of space-based navigation and positioning systems, including Global



Addressing the issues

FINAL DRAFT FOR ENDORSEMENT

UNITED NATIONS COMMITTEE OF EXPERTS ON GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT

Subcommittee on Geodesy

Version: 29 July 2021

E/C.20/2021/7/Add.2

Position Paper on Sustaining the Global Geodetic Reference Frame

A plan to help achieve the long-term accuracy and accessibility of the Global Geodetic Reference Frame

Strategy and Action Plan to sustain all the elements of the geodesy value chain

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Concept Paper on Establishing a Global Geodetic Centre of Excellence

Dedicated people focussed on improving collaboration and coordination amongst the global geodetic community



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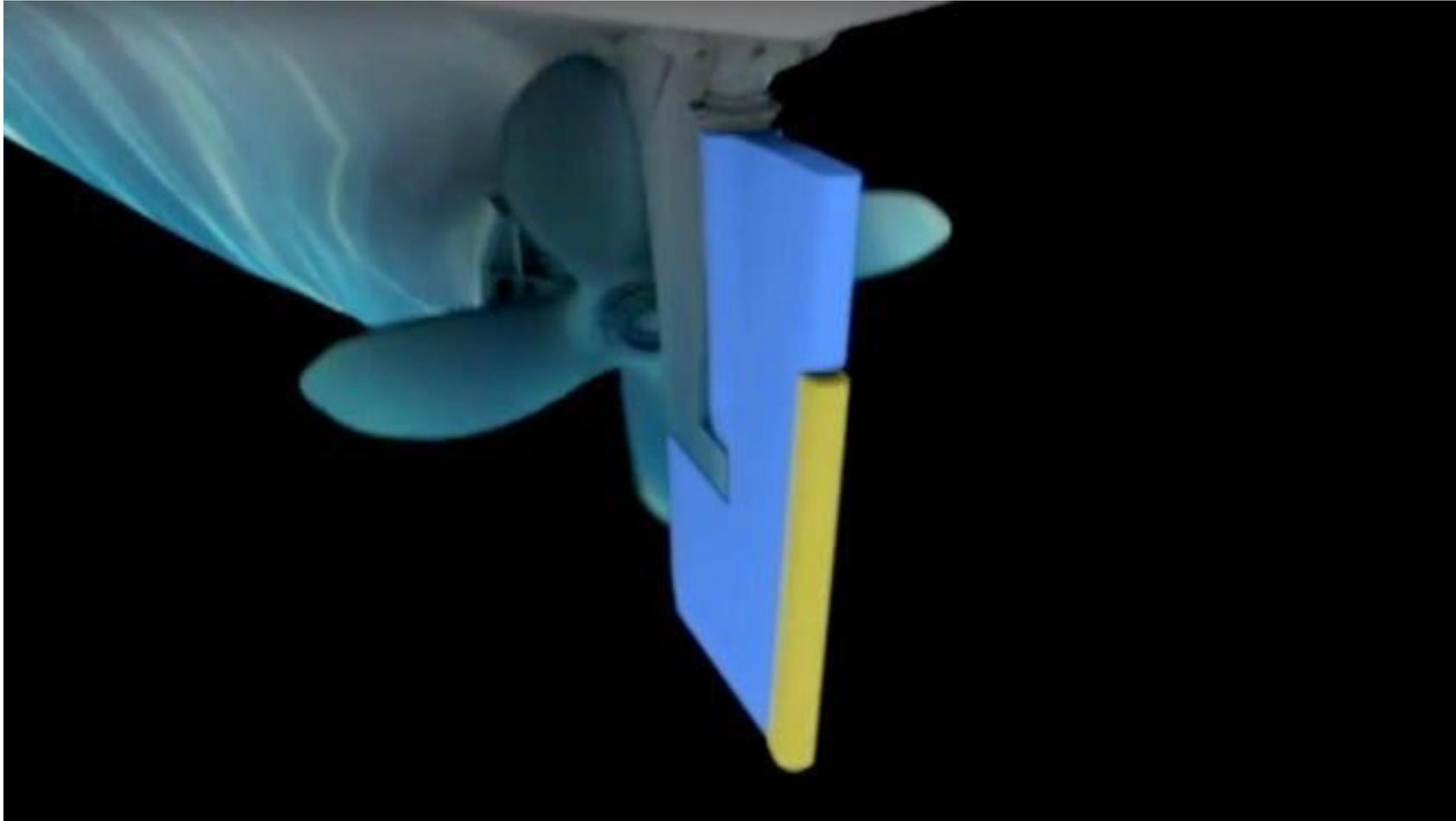
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Be the Trimtab



Source: Steve Strauss



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